

REMARKS

In the non-final Office Action, the Examiner rejects claims 1-41 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,891,858 to MAHESH et al. et al. Applicant respectfully traverses this rejection.¹

By this Amendment, Applicant amends claims 1-17, 20-22, 25-27, 29, 30, 33, 36, 37, 40 and 41 to improve form. No new matter is added by way of the present amendment. Claims 1-41 remain pending in the present application.

Claims 1-41 are rejected under 35 U.S.C. § 102(e) as allegedly anticipated by MAHESH et al. Applicant respectfully traverses this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference discloses every aspect of the claimed invention. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. MAHESH et al. does not disclose or suggest the combination of features recited in claims 1-41.

1. Rejection of claims 1-8 under 35 U.S.C. §102(e)

Amended claim 1 is directed to a method of altering modem transmission characteristics, including setting a modem to transmit on a first upstream channel on a first frequency using first transmission characteristics; monitoring a quality of upstream transmissions from the modem on the first upstream channel; and setting the modem to transmit on a second different upstream channel on a second different frequency using

¹ As Applicant remarks with respect to the Examiner's rejections overcome the rejections, Applicant's silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, assertions as to dependent claims, etc.) is not a concession by Applicant that such assertions are accurate or that such requirements have been met, and Applicant reserves the right to dispute these assertions/requirements in the future.

second transmission characteristics based on the monitored quality. MAHESH et al. does not disclose or suggest the above combination of features.

For example, MAHESH et al. does not disclose or suggest setting the modem to transmit on a second different upstream channel on a second different frequency using second transmission characteristics based on the monitored quality, as required in amended independent claim 1. The Office Action relies on Figure 4 of MAHESH et al. as disclosing “setting the modem to transmit on a second upstream channel using second transmission characteristics based on the monitored quality,” (Office Action page 3). The Office Action also asserts that the claimed first and second channels are analogous to different modulation profiles, such as the different modulation profiles taught by MAHESH et al., (Office Action page 3). Applicant respectfully disagrees with the Office Action’s interpretation of MAHESH et al. Applicant submits that neither this section nor any other section of MAHESH et al. discloses or suggests the above feature of claim 1.

Figure 4 of MAHESH et al. depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). Neither this figure of MAHESH et al. nor the description thereof discloses or suggests setting the modem to transmit on a second different upstream channel on a second different frequency using second

transmission characteristics based on the monitored quality, as required by independent claim 1.

Thus, MAHESH et al. does not disclose all the features of amended independent claim 1. For at least the foregoing reasons, Applicant respectfully submits that claim 1 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 2-8 depend from and include all the features of amended independent claim 1. Therefore, claims 2-8 are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 1. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 2-8 under 35 U.S.C. § 102(e) based on MAHESH et al.

2. Rejection of claims 9-16 under 35 U.S.C. §102(e)

Amended independent claim 9 is directed to a cable modem termination system, including a memory configured to store instructions; a communication interface configured to receive transmissions comprising first transmission characteristics from a modem on a first upstream channel on a first frequency, and measure a quality of the received upstream transmissions from the modem; and a processor configured to execute the instructions in the memory to monitor the measured quality of the received transmissions, and send a message, via the communication interface, instructing the modem to transmit on a second different upstream channel on a second different

frequency using second transmission characteristics based on the monitored quality.

MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose a processor configured to execute the instructions in the memory to send a message, via the communication interface, instructing the modem to transmit on a second different upstream channel on a second different frequency using second transmission characteristics based on the monitored quality, as required in amended claim 9. The Office Action cites to Figure 4 of MAHESH et al. and the Office Action's discussion of claim 1 as allegedly disclosing, "send a message, via the communication interface, instructing the modem to transmit on a second upstream channel using second transmission characteristics based on the monitored quality," (Office Action, page 4). Applicant respectfully submits that neither this figure nor any other section of MAHESH et al. discloses or suggests the above feature of claim 9.

As discussed above with respect to claim 1, Figure 4 of MAHESH et al. depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). Neither this figure of MAHESH et al. nor the description thereof discloses or suggests a processor configured to execute the instructions in the memory to send a

message, via the communication interface, instructing the modem to transmit on a second different upstream channel on a second different frequency using second transmission characteristics based on the monitored quality, as required in amended claim 9.

Thus, MAHESH et al. does not disclose or suggest all of the features of amended independent claim 9. For at least the foregoing reasons, Applicant respectfully submits that independent claim 9 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 9 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 10-16 depend from and include all the features of amended independent claim 9. Therefore, these claims are not anticipated by MAHESH et al. for at least the reasons given above with respect to amended claim 9. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 10-16 under 35 U.S.C. § 102(e) based on MAHESH et al.

3. Rejection of claims 17-21 under 35 U.S.C. §102(e)

Amended independent claim 17 is directed to a method of controlling transmission characteristics of cable modems, including monitoring upstream transmission quality of one or more cable modems; and commanding at least one of the one or more cable modems to change its transmission characteristics based on the monitored quality, including changing from a first preamble length to a second different preamble length. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest commanding at least one of the one or more cable modems to change its transmission characteristics based on the monitored quality, including changing from a first preamble length to a second different preamble length, as required in amended independent claim 17.

MAHESH et al., at col. 3, lines 42-45, merely discloses a head end that uses a first modulation profile for receiving communication signals from at least one network node on a first channel. When the head end detects a change on a channel condition on the first channel, the head end uses a second modulation profile for receiving communications on the same first channel (MAHESH et al., col. 3, lines 46-50). MAHESH et al. merely discloses changing a modulation profile on a same channel. MAHESH et al. does not disclose that changing modulation profiles is equivalent to or includes changing preamble lengths.

Thus, MAHESH et al. does not disclose or suggest commanding at least one of the one or more cable modems to change its transmission characteristics based on the monitored quality, including changing from a first preamble length to a second different preamble length, as required in amended independent claim 17.

Thus, MAHESH et al. does not disclose or suggest all the features of amended claim 17. For at least the foregoing reasons, Applicant respectfully asserts that claim 17 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 17 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 18-21 depend from and include all the features of amended independent claim 17. Therefore, these claims are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 17. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 18-21 under 35 U.S.C. § 102(e) based on MAHESH et al.

4. Rejection of claims 22-26 under 35 U.S.C. §102 (e)

Amended independent claim 22 is directed to a cable modem termination system, comprising a memory configured to store instructions, and a processor configured to execute the instructions in the memory to monitor upstream transmission quality of one or more cable modems, and instruct at least one of the one or more cable modems to change its transmission characteristics, including changing from a first time division multiplexed timeslot size to a second different time division multiplexed timeslot size, when the monitored quality meets a specified criteria. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest a processor configured to execute the instructions in the memory to instruct at least one of the one or more cable modems to change its transmission characteristics, including changing from a first time division multiplexed timeslot size to a second different time division multiplexed timeslot size, when the monitored quality meets a specified criteria, as required in amended independent claim 22.

As discussed above with respect to claim 17, MAHESH et al., at col. 3, lines 42-45, merely discloses a head end that uses a first modulation profile for receiving

communication signals from at least one network node on a first channel. When the head end detects a change on a channel condition on the first channel, the head end uses a second modulation profile for receiving communications on the same first channel (MAHESH et al., col. 3, lines 46-50). MAHESH et al. merely discloses a change in modulation profiles on a same channel. MAHESH et al. does not disclose or suggest that changing modulation profiles is equivalent to or includes changing from a first time division multiplexed timeslot size to a second time division multiplexed time slot size, as required in amended independent claim 22.

Thus, MAHESH et al. does not disclose or suggest a processor configured to execute the instructions in the memory to instruct at least one of the one or more cable modems to change its transmission characteristics, including changing from a first time division multiplexed timeslot size to a second different time division multiplexed timeslot size, when the monitored quality meets a specified criteria, as required in amended independent claim 22.

Thus, MAHESH et al. does not disclose or suggest all the features of amended claim 22. For at least the foregoing reasons, Applicant respectfully submits that amended independent claim 22 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 22 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 23-26 depend from and include all the features of amended independent claim 22. Therefore, claims 23-26 are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 22. Applicant respectfully requests that the

Examiner reconsider and withdraw the rejection of claims 23-26 under 35 U.S.C. § 102(e) based on MAHESH et al.

5. Rejection of claims 27-29 under 35 U.S.C. §102(e)

Amended independent claim 27 is directed to a method of changing transmission characteristics at a modem in a cable modem system, including transmitting on a first channel on a first frequency; receiving a command to select different upstream transmission characteristics; selecting the different upstream transmission characteristics in accordance with the command; and transmitting on a second different upstream channel on a second different frequency using the different upstream transmission characteristics. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest transmitting on a second different upstream channel on a second different frequency using the different upstream transmission characteristics, as required by amended claim 27. The Office Action relies on Figure 4 and col. 11, lines 25-31 of MAHESH et al. as allegedly disclosing “transmitting on an upstream channel using the different upstream transmission characteristics,” (Office Action page 5). Applicant submits that neither these sections nor any other section of MAHESH et al. discloses or suggests the above feature of claim 27.

As discussed above with respect to claim 1, Figure 4 of MAHESH et al. depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit

using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). Neither this figure of MAHESH et al. nor the description thereof discloses or suggests transmitting on a second different upstream channel on a second different frequency using the different upstream transmission characteristics, as required in amended claim 27.

At col. 11, lines 25-31, MAHESH et al. describes:

After the cable modem has reconfigured itself to utilize the new modulation profile, it may then begin communicating with the CMTS on the specified channel using the new modulation profile. Thus, for example, if the cable modem changes the modulation profile for its current upstream channel, it may then begin transmitting data on the upstream channel to the CMTS using the new modulation profile.

This section of MAHESH et al. discloses that after a cable modem has reconfigured itself with another modulation profile, it communicates with the CMTS on the same channel using another modulation profile. Mere reconfiguration of a cable modem profile within a single channel, as disclosed by MAHESH et al., cannot be reasonably construed as transmitting on a second different upstream channel on a second different frequency using the different upstream transmission characteristics, as required by amended claim 27.

Thus, MAHESH et al. does not disclose or suggest all the features of independent claim 27. For at least the foregoing reasons, Applicant respectfully asserts that claim 27 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that

the Examiner reconsider and withdraw the rejection of claim 27 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 28 and 29 depend from and include all the features of independent claim 27. Therefore, claims 28 and 29 are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 27. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 28 and 29 under 35 U.S.C. § 102(e) based on MAHESH et al.

6. Rejection of claims 30-32 under 35 U.S.C. §102(e)

Amended independent claim 30 is directed to a cable modem, including a memory configured to store instructions; a communication interface configured to receive an instruction to select different upstream transmission characteristics; and a processing unit configured to transmit on a first upstream channel on a first frequency, select the different upstream transmission characteristics in accordance with the instruction, and initiate transmission on a second different upstream channel on a second different frequency using the different upstream transmission characteristics. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest initiating transmission on a second different upstream channel on a second different frequency using the different upstream transmission characteristics, as required in amended independent claim 30. The Office Action relies on Figure 4, col. 11, lines 25-31 of MAHESH et al. as allegedly disclosing “initiate transmission on an upstream channel using different upstream transmission characteristics,” (Office Action page 6). Applicant respectfully

submits that neither these sections nor any other section of MAHESH et al. discloses or suggests the above feature of claim 30.

As discussed above with respect to claim 1, Figure 4 of MAHESH et al. depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). Neither this figure of MAHESH et al. nor the description thereof discloses or suggests initiating transmission on a second different upstream channel on a second different frequency using the different upstream transmission characteristics, as required in amended independent claim 30.

Also as discussed above, col. 11, lines 25-31 of MAHESH et al. discloses that after a cable modem has reconfigured itself with another modulation profile, it communicates with the CMTS on a same channel using the modulation profile. Mere reconfiguration of a cable modem profile within a single channel, as disclosed by MAHESH et al., cannot be reasonably construed as initiating transmission on a second different upstream channel on a second different frequency using the different upstream transmission characteristics, as required in amended claim 30. Thus, MAHESH et al. does not disclose or suggest initiating transmission on a second different upstream

channel on a second different frequency using the different upstream transmission characteristics, as required in amended claim 30.

Thus, MAHESH et al. does not disclose or suggest all the features of independent claim 30. For at least the foregoing reasons, Applicant respectfully submits that claim 30 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 30 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 31 and 32 depend from and include all the features of independent claim 30. Therefore, claims 31 and 32 are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 30. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 31 and 32 under 35 U.S.C. § 102(e) based on MAHESH et al.

7. Rejection of claims 33-36 under 35 U.S.C. §102(e)

Amended independent claim 33 is directed to a method of changing virtual upstream channels in a cable modem system, including monitoring upstream signal qualities associated with one or more cable modems; and selectively switching at least one of the one or more cable modems between different virtual upstream channels with different frequencies based on the signal quality monitoring. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest selectively switching at least one of the one or more cable modems between different virtual upstream channels with different frequencies based on the signal quality monitoring, as required in amended

independent claim 33. The Office Action relies on Figure 4 and col. 11, lines 14-31 of MAHESH et al. as allegedly disclosing, “selectively switching at least one of the one or more cable modems between virtual upstream channels based on the signal quality monitoring,” (Office Action page 6). Applicant respectfully submits that neither of these sections nor any other section of MAHESH et al. discloses or suggests the above feature of claim 33.

As discussed above, Figure 4 of MAHESH et al. depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). Neither this figure of MAHESH et al. nor the description thereof discloses or suggests selectively switching at least one of the one or more cable modems between different virtual upstream channels with different frequencies based on the signal quality monitoring, as required in amended independent claim 33.

MAHESH et al., at col. 11, lines 14-31 discloses

In accordance with the technique of the present invention, however, the cable modems of the cable network are able to dynamically reconfigure themselves in response to receiving one or more new modulation profile messages from the CMTS. Thus, as shown at 404 of FIG. 4, once the cable modem receives a new modulation profile message, it resets and/or reconfigures its hardware and/or software to implement the new modulation profile for the specified channel. The reconfiguration of the

cable modem may be performed in accordance with conventional techniques commonly known to one having ordinary skill in the art.

After the cable modem has reconfigured itself to utilize the new modulation profile, it may then begin communicating with the CMTS on the specified channel using the new modulation profile. Thus, for example, if the cable modem changes the modulation profile for its current upstream channel, it may then begin transmitting data on the upstream channel to the CMTS using the new modulation profile.

This section of MAHESH et al. discloses that cable modems are capable of reconfiguring themselves in response to a received message from a cable modem termination server.

After the cable modem has reconfigured itself with another modulation profile then it communicates with the CMTS on a same channel using the modulation profile. This section of MAHESH et al. does not disclose or suggest selectively switching at least one of the one or more cable modems between different virtual upstream channels with different frequencies based on the signal quality monitoring, as required in amended claim 33. Mere reconfiguration of a cable modem profile within a single channel, as disclosed by MAHESH et al., cannot be reasonably construed as selectively switching at least one of the one or more cable modems between different virtual upstream channels with different frequencies based on the signal quality monitoring, as required in claim 33.

MAHESH et al. does not disclose or suggest all the features of claim 33. For at least the foregoing reasons, Applicant respectfully submits that claim 33 is not anticipated by MAHESH et al. for at least the reasons given above with respect to independent claim 33. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 33 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 34-36 depend from and include all the features of independent claim 33. Therefore, these claims are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 33. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 34-36 under 35 U.S.C. § 102(e) based on MAHESH et al.

8. Rejection of claims 37-40 under 35 U.S.C. §102(e)

Amended independent claim 37 is directed to a cable modem termination system, including a memory configured to store instructions, a communication interface configured to measure signal qualities of upstream transmissions associated with one or more cable modems, and a processor configured to execute the instructions in the memory to monitor the measured upstream signal qualities, and selectively command at least one of the one or more cable modems to switch between different virtual upstream channels based on the signal quality monitoring. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest a processor configured to execute the instructions in the memory to selectively command at least one of the one or more cable modems to switch between different virtual upstream channels based on the signal quality monitoring, as required in amended independent claim 37. The Office Action relies on Figure 4 of MAHESH et al. and points to the Office Action's discussion of claim 1 as allegedly disclosing "selectively command at least one of the one or more cable modems to switch between virtual upstream channels based on the signal quality monitoring," (Office Action page 7). Applicant respectfully submits that neither this

section nor any other section of MAHESH et al. discloses or suggest the above feature of claim 37.

As discussed above with respect to claim 1, Figure 4 of MAHESH et al. depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). Neither this figure of MAHESH et al. nor the description thereof discloses or suggests a processor configured to execute the instructions in the memory to selectively command at least one of the one or more cable modems to switch between different virtual upstream channels based on the signal quality monitoring, as required in amended independent claim 37.

Thus, MAHESH et al. does not disclose all the features of amended claim 37. For at least the foregoing reasons, Applicant respectfully submits that claim 37 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 37 under 35 U.S.C. §102(e) based on MAHESH et al.

Claims 38-40 depend from and include all the features of amended independent claim 37. Therefore, claims 38-40 are not anticipated by MAHESH et al. for at least the reasons given above with respect to claim 37. Accordingly, Applicant respectfully

requests that the Examiner reconsider and withdraw the rejection of claims 38-40 under 35 U.S.C. § 102(e) based on MAHESH et al.

9. Rejection of independent claim 41 under 35 U.S.C. §102(e)

Amended independent claim 41 is directed to a system for controlling transmission characteristics of a cable modem, including means for sending an upstream channel descriptor to one or more cable modems, means for monitoring upstream transmission quality of the one or more cable modems, and means for commanding at least one of the one or more cable modems to change its transmission characteristics, including changing from a first data block size to a second different data block size, based on the sent upstream channel descriptor and the monitored quality. MAHESH et al. does not disclose or suggest this combination of features.

For example, MAHESH et al. does not disclose or suggest means for commanding at least one of the one or more cable modems to change its transmission characteristics, including changing from a first data block size to a second different data block size, based on the sent upstream channel descriptor and the monitored quality, as required in amended independent claim 41. The Office Action cites to Figures 2-4 of MAHESH et al. as allegedly disclosing, “means for commanding at least one of the one or more cable modems to change its transmission characteristics based on the monitored quality,” (Office Action page 7). Applicant respectfully asserts that neither this section nor any other section of MAHESH et al. discloses or suggests the above feature of claim 41.

Figure 2 of MAHESH et al. depicts a flow diagram of a CMTS Dynamic Modulation Analysis Procedure. The CMTS Dynamic Modulation Analysis Procedure monitors channel conditions of selected channels of an access network to determine if any change is necessary (see, for example, MAHESH et al. col. 5, lines 20-60). This section of MAHESH et al. merely discloses that modulation profiles are changed within a same channel. This section of MAHESH et al. does not disclose that changing modulation profiles is equivalent to or includes changing data block sizes. Neither this figure of MAHESH et al. nor the description thereof discloses or suggests means for commanding at least one of the one or more cable modems to change its transmission characteristics, including changing from a first data block size to a second different data block size, based on the sent upstream channel descriptor and the monitored quality, as required in amended independent claim 41.

Figure 3 of MAHESH et al. depicts a flow diagram of a Change Modulation Profile Procedure. This Change Modulation Profile Procedure causes the modulation profile of a selected channel to change to a different modulation profile within a same channel (see, for example, MAHESH et al., col. 10, lines 33-45). This section of MAHESH et al. does not disclose that changing modulation profiles is equivalent to or includes changing data block sizes. Neither this figure of MAHESH et al. nor the description thereof discloses or suggests means for commanding at least one of the one or more cable modems to change its transmission characteristics, including changing from a first data block size to a second different data block size, based on the sent upstream

channel descriptor and the monitored quality, as required in amended independent claim 41.

As discussed above, Figure 4 depicts a flow chart diagram of a cable modem modulation change procedure. A cable modem first receives a new modulation profile message from a cable modem transaction service, resets the cable modem with the new profile and causes the cable modem to transmit using the new profile (see, for example, col. 11, lines 15-22). MAHESH et al. specifically discloses that the cable modem transmits, using the new profile, on the same channel as previous transmissions (see, for example, col. 3, lines 42-50 and col. 11, lines 25-31). This section of MAHESH et al. does not disclose or suggest that changing modulation profiles is equivalent to or includes changing data block sizes. Neither this figure of MAHESH et al. nor the description thereof discloses or suggests means for commanding at least one of the one or more cable modems to change its transmission characteristics, including changing from a first data block size to a second different data block size, based on the sent upstream channel descriptor and the monitored quality, as required in amended independent claim 41.

Thus, MAHESH et al. does not disclose or suggest all of the features of amended independent claim 41. For at least the foregoing reasons, Applicant respectfully submits claim 41 is not anticipated by MAHESH et al. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 41 under 35 U.S.C. § 102(e) based on MAHESH et al.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicant's representative, the Examiner is invited to contact the undersigned by telephone in order to expedite prosecution of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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